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**BAY BRIDGE DESIGN TASK FORCE  
ENGINEERING AND DESIGN  
ADVISORY PANEL  
Tuesday, July 6, 1999  
1 p.m.  
Joseph P. Bort MetroCenter Auditorium  
101 Eighth Street  
Oakland, California 94607**

**Chairperson:** Joseph Nicoletti  
**Vice Chair:** John Kriken  
**Staff Liaison:** Steve Heminger

**FINAL AGENDA**

1. Welcome and introductions - Joseph Nicoletti, Chair, and John Kriken, Vice Chair
2. Approval of draft meeting record for January 4, 1999 meeting\*
3. Recent project-related correspondence -- Larry Dahms, MTC\*
4. Status report on final Environmental Impact Statement -- Denis Mulligan, Caltrans
5. Presentation of detailed design information on recommended new eastern span - Brian Maroney, Caltrans, and TY Lin design team
6. Report from Seismic Safety Peer Review Panel - Frieder Seible
7. EDAP discussion and comments
8. Other business/public comment

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\* Attachment sent to members, key staff, and others as appropriate. Copies available at meeting.

**Public Comment:** The public is encouraged to comment on agenda items at committee meetings by completing a request-to-speak card (available from staff) and passing it to the committee secretary or chairperson. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

**Record of Meeting:** MTC meetings are tape recorded. Copies of recordings are available at nominal charge, or recordings may be listened to at MTC offices by appointment.

**Sign Language Interpreter or Reader:** If requested three (3) working days in advance, sign language interpreter or reader will be provided; for information on getting written materials in alternate formats call 510/464-7787.

**Transit Access to MTC:** BART to Lake Merritt Station. AC Transit buses: #11 from Piedmont or Montclair; #59A from Montclair; #62 from East or West Oakland; #35X from Alameda; #36X from Hayward.

**Parking at MTC:** Metered parking is available on the street. No public parking is provided.

**BAY BRIDGE DESIGN TASK FORCE  
Engineering and Design Advisory Panel  
January 4, 1999 Meeting  
Oakland, CA**

**Draft Record of Meeting**

**Panel attendance**

Joseph Nicoletti (Chair), John Kriken (Vice Chair), Christopher Arnold, Roger Borchardt, Jerry Fox, Ben Gerwick, Jeffrey Heller, Ephraim Hirsch, I.M. Idriss, Jim McCarty, Roumen Mladjov, Frieder Seible, Steve Thompson, Edward Wilson, Thomas Wosser, and Y.C. Yang.

**Approval of draft meeting record for October 9 meeting**

The minutes were approved with corrections to the record of comments made by Roumen Mladjov and Steve Thompson.

**Status report on environmental impact statement and geotechnical investigations**

Brian Maroney of Caltrans reported that the comment period on the draft environmental impact statement (DEIS) had closed and, on December 28, 1998, Caltrans had identified the EDAP- and MTC-recommended bridge design as the preferred alternative. The final EIS is to be released in Spring 1999, with the federal record of decision scheduled for Summer 1999 at which the time the final selection of bridge design and alignment will be confirmed.

Maroney also reported on the status of geotechnical investigations along the recommended northern alignment, and that the U.S. Navy had refused permission for Caltrans to drill borings near and on Yerba Buena Island due to its opposition to that alignment. Maroney later indicated that Caltrans' Seismic Advisory Board had written a letter to the Bay Area congressional delegation expressing concern about the Navy's action; a copy of the letter was distributed to EDAP.

**Presentation of detailed design information on recommended new eastern span**

Rafael Manzanarez of the TY Lin firm led off the design team presentation with a brief summary and history of the design team's efforts to date and the range of issues that the team intends to cover in the remaining phases of design.

Jeffrey Heller made brief comments on the potential for a gateway park at the Oakland touchdown of the new span, including the timetable for preliminary park planning and public outreach in 1999 with a limited design competition in the year 2000, leading to construction of the park after the construction of the new bridge.

Al Ely of the TY Lin design team made a detailed presentation on recent work on the transition structures at Yerba Buena Island, where the side-by-side spans of the new bridge transition into the double-decked tunnel on the island. His presentation included reference to the existing features of the current bridge, property ownership and historic

preservation issues, horizontal and vertical configuration of the proposed transition structures, column location and land use restrictions, and the incorporation of a new eastbound on-ramp at the island.

Don MacDonald of the design team reported on the architectural elements of the transition structures and that the team was striving to reduce the number and visual impact of columns and outrigger bents at the island.

#### EDAP discussion and comments

After a question and answer period with Caltrans staff and members of the design team, Chair Joseph Nicoletti invited panel members to make individual comments on the detailed design information presented at the meeting, which are summarized as follows:

Jerry Fox stated that the Yerba Buena Island (YBI) transition structure presented was a big improvement from the last meeting, and that he wanted EDAP to approve the current design concept so that the team can move ahead with detailing it.

Frieder Seible expressed concern about the inconsistency of the suspension tower treatment in the slides and the bridge model. He also questioned how far down the design articulations would go on the viaduct piers, with respect to potential plastic hinging at those locations.

Steve Thompson said he saw very little that was new on the viaduct section of the bridge, expressed concern about the single pile cap for the main span's eastern pier and said he preferred the two separate pile caps used throughout the rest of the viaduct, and also stressed the need to further reduce the number of columns supporting the YBI transition structure.

Jeffrey Heller stated that there was positive improvement on the YBI structures, but also stressed that more columns should be eliminated if possible. He also said the team should eliminate the concrete bollards from the sidewalk railing design, because it could obstruct the views of motorists. He said that pedestrian outlooks should be included in the design and that light standards should be "punctuation elements" at pier locations for the viaduct spans. Finally, he agreed with Steve Thompson about the desirability of separate pile caps for the main span eastern pier.

(At this point, Al Ely of the design team interjected that the team was itself reconsidering the concrete bollards, was reconsidering the location of the light standards, and would include the fender design at the next EDAP meeting for the main span's eastern pier, which would likely obscure the pile cap or caps at that location.)

Vice Chair John Kriken commended the YBI transition improvements, especially the column treatment and the separation of the eastbound on-ramp from the outrigger bent at that location. He expressed support for continuing the viaduct light standards onto the main suspension span, and asked the design team to consider a west span tie-down that was external to -- or separate from -- the west pier itself.

Chair Joseph Nicoletti congratulated the team on the YBI transition design.

Ephraim Hirsch expressed the following concerns about the YBI transition structures: the close proximity of the columns to the bridge decks, the disparity of column sizes, and the number of columns. He also supported elimination of the sidewalk bollards, and warned the design team not to fall into a "consistency trap" of repeating the shape of the main tower in the viaduct and YBI columns.

Christopher Arnold also commended the improvement in the YBI transition structures, said he favors viaduct piers echoing the main span tower design, and said he opposes the sidewalk bollards.

Thomas Wosser stated that his major concern was the clearance between columns and bridge decks at YBI; he also expressed support for the pentagonal shape of the viaduct piers.

Roger Borchardt commended Caltrans and the design team on the just-released ground motion report and said it appeared "state of the art". He also requested that, at the next EDAP meeting, the team present more detailed information about how it intended to design for the large differences in ground motion at the western and eastern piers of the suspended spans.

Roumen Mladjov stated that the bridge model makes it appear that the suspension span has negative curvature, and it should be corrected. He also recommended that the suspension span should not be tied down vertically through the west pier but should continue at an angle to be tied down at the next most westerly pier. He expressed a preference for simplifying the viaduct pier design instead of repeating the main tower's pentagonal shape. He also agreed that the YBI transition structures had been significantly improved, but that the number of columns could be further reduced if the design team considered construction materials other than concrete, such as steel.

Ben Gerwick commended the YBI transition design, but questioned whether the restriction on not relocating the Navy fire station could be modified in order to reduce the number of columns on YBI. He also supported simplifying the viaduct pier design.

Y.C. Yang expressed concern about the differential ground motions at the eastern and western piers of the main span; he also agreed that accommodating rail into the design now made more sense than adding it after the bridge has been constructed.

Jim McCarty also commended the YBI transition design, and opposed reducing the number of light standards on the viaduct because they help convey and reinforce the sense of traveling on a bridge.

At the conclusion of these individual comments, Chair Nicoletti invited motions on any recommendations that EDAP wished to make as a group. After discussion, the following two motions were approved unanimously:

1. The design team should strive for transparency and minimize or eliminate the concrete bollards on the sidewalk railing, while taking care not to adversely affect the visual experience for bicyclists or pedestrians using the sidewalk.
2. The design team should consider further reductions in the number of columns supporting the YBI transition structures, including the consideration of alternate construction materials.

Public comment

There was no public comment.

# OAKLAND MOLE APPROACH

